

Complex Culvert Program

Purpose & Scope

The Alaska Railroad's (ARRC) 500-plus miles of mainline and branch track includes over 1,200 culverts, of which approximately 250 have been identified as Complex Culverts. The purpose and scope of the Complex Culvert Program is to prioritize culverts for replacement. This program will maintain Alaska's critical transportation corridor and reduce the risk of property damage, service disruption, and bodily harm that may result from culvert failures. Culverts may be re-assessed as necessary to support this program.

The Complex Culvert Program plans to replace or rehabilitate dozens of culverts over the next 5-10 years and beyond. Culverts will typically consist of Corrugated Metal Pipe (CMP), Smooth Steel Pipe (SSP), or High Density Polyethylene Pipe (HDPE).

Program Parameters

The Complex Culvert Program assesses culvert conditions and replaces structures as necessary. Complex culverts are generally considered large diameter culverts, require fish passage design, and/or buried deep within the track embankment.

Complex Culverts considered under this program are



Culvert located at MP 225.97 near Talkeetna Depot.

defined by at least one of the following factors:

1. Large Culverts:

Culverts typically larger than 48-inches in diameter and over 60-feet long. Culverts larger than 10-feet in diameter are considered by American Railway Engineering and Maintenance-of-Way Association (AREMA) to be bridges and not included within this program; therefore, are incorporated into ARRC's Bridge Program.

2. Fish Passage

Culverts with fish passage design requirements.

3. Deep Burial Culverts:

Culverts buried deeper than 10-feet underneath track ties.

Program Progress

The Complex Culvert Program involves four components: condition assessments, prioritize locations, engineering, and construction.

1. Condition Assessments:

Assess culvert conditions and update the existing culvert inventory database to support the Program.

2. Prioritize Locations:

Prioritize culvert locations based on condition assessments. Individually modify priorities based on locations and funding availability.

3. Engineering:

Conduct preliminary engineering activities (surveys, engineering, consultation, etc.) to provide 30% design and complete National Environmental Policy Act (NEPA) documentation for proposed projects, as necessary. Complete final design and obtain necessary permitting for construction.

4. Construction:

Construct proposed culvert projects.

PROJECT FACTS

Project Benefits

ARRC's Complex Culvert Program's multi-year plans will address the following conditions:

- Replace and upsize deteriorated culverts according to site conditions.
- Improve fish passage.
- Provide for adequate hydraulic capacity for streams and drainages.
- Reduce overall maintenance costs.

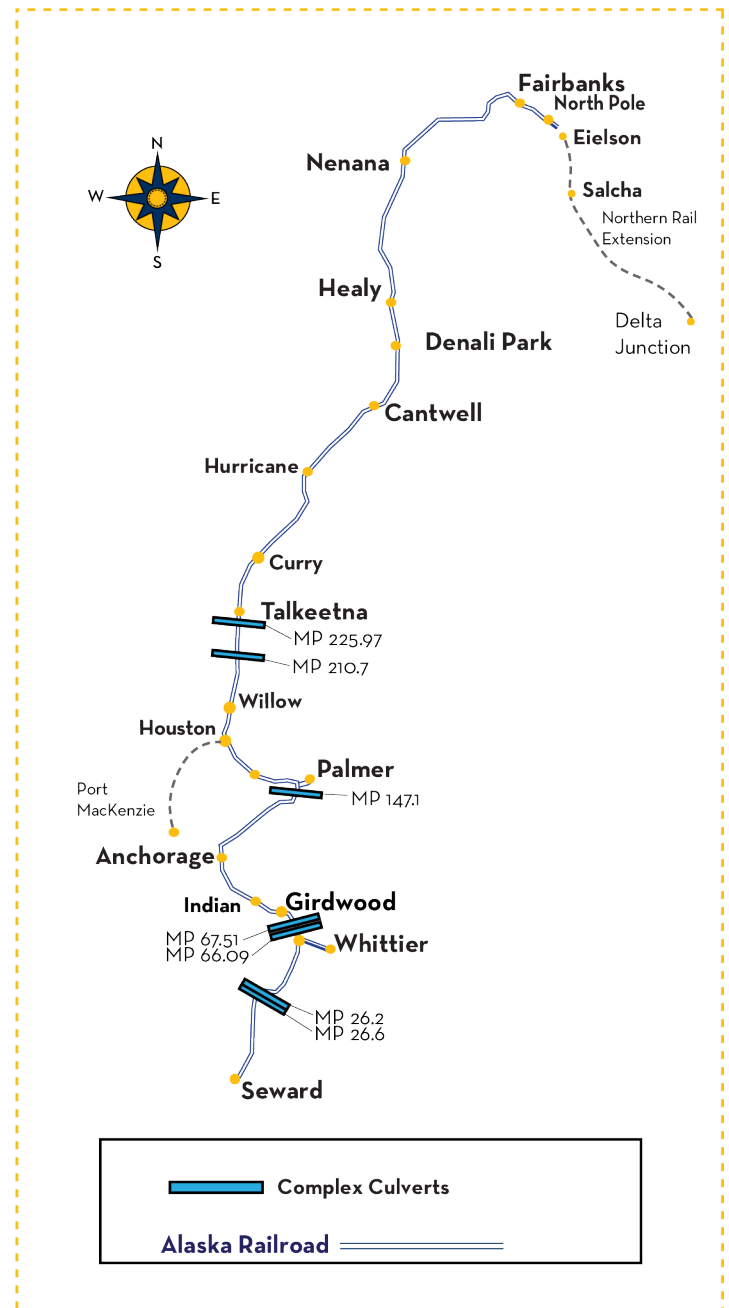
2025 Project Status

Culvert projects are identified by the Alaska Railroad Milepost (MP) location, followed by a project status (Preliminary Engineering, NEPA/Permitting, Final Design and Construction), general site description, and proposed work, if it has been determined.

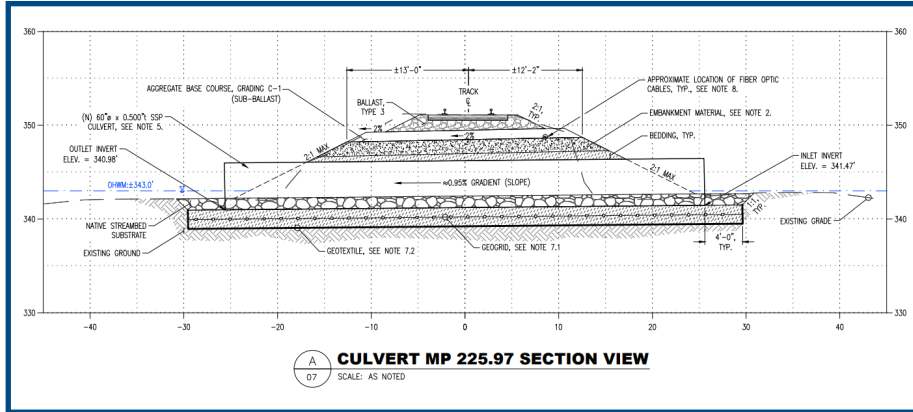
- **MP 26.2 & 26.6** - Preliminary engineering (O-30% design) is underway. Currently, each location has one 36-inch diameter CMP culvert being considered for replacement.
- **MP 66.09** - NEPA approval and Final Design completed in 2025 and construction activities are anticipated to begin in fall 2025. The existing culvert is a CMP of unknown size and dimension. Construction includes the replacement of the existing CMP culvert with a 9-foot diameter, SSP.
- **MP 67.51** - NEPA approval and Final Design completed in 2025 and construction activities are anticipated to begin in fall 2025. The existing culvert is a CMP of unknown size and dimension. Construction includes the replacement of the existing CMP culvert with a 5-foot diameter, SSP.
- **MP 147.1** - Preliminary engineering (O-30% design) is underway. The existing culvert is a 66-inch diameter CMP culvert being considered for replacement.
- **MP 210.7** - Preliminary engineering (O-30% design) underway. The existing culvert is a 36-inch diameter CMP culvert being considered for replacement.
- **MP 225.97** - Preliminary engineering (30% design) is complete. NEPA documentation was submitted to the Federal Transit Administration (FTA) in late summer of 2025. Final design and construction are anticipated during 2026-2027.

Cost and Funding

The majority of ARRC's Complex Culvert Program is expected to be funded with Federal Transit Administration (FTA) formula funds, which require a 20% match by ARRC. The remaining culvert projects are internally funded by ARRC or through alternative grant opportunities.



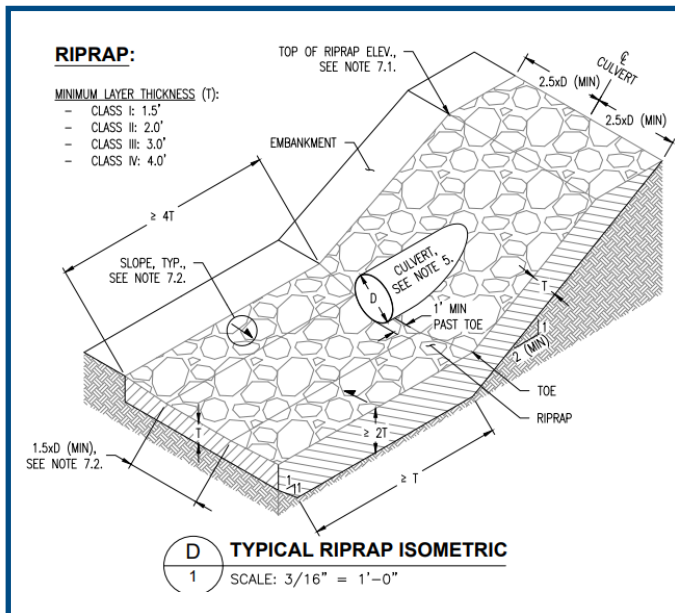
Map showing the culverts identified as part of ARRC's Complex Culvert Program.



Section view of culvert at MP 225.97 is a typical design for culverts.



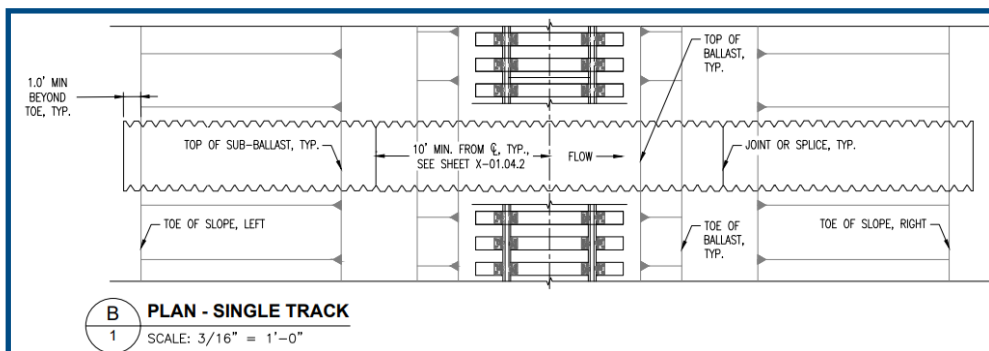
A submerged culvert located at MP 66.09.



Typical design for use of riprap.



Culvert located at MP 26.2.



Typical design for culverts.

More Information

For more project information, email the Alaska Railroad at Public.Comment@akrr.com. Additional project fact sheets are available online at AlaskaRailroad.com > [Corporate](#) > [Projects](#) (look under System Wide Projects).